

WHAT IS CLAIMED IS:

1           1. A system for recording media content and for generating media  
2 representations, the system comprising:  
3           an extraction module for extracting of media content from a media receiver;  
4           an output device for generating a media representation of media content extracted  
5           from the media receiver, the output device being coupled to the extraction  
6           module; and  
7           a media transfer interface for permitting communication between the output  
8           device and the media receiver, the media transfer interface being coupled  
9           to the media receiver.

1           2. The system of claim 1, further comprising media content recognition software  
2 for recognizing features in media content.

1           3. The system of claim 2, wherein the media content recognition software further  
2 comprises speech recognition software.

1           4. The system of claim 2, wherein the media content recognition software further  
2 comprises optical character recognition software.

1           5. The system of claim 2, wherein the media content recognition software further  
2 comprises face detection software.

1           6. The system of claim 2, wherein the media content recognition software further  
2 comprises speaker detection software.

1           7. The system of claim 2, wherein the media content recognition software further  
2 comprises keyframe selection software.

1           8. The system of claim 2, wherein the media content recognition software further  
2 comprises face recognition software.

1           9. The system of claim 1, further comprising processing logic for controlling  
2 display of a user interface, wherein the user interface permits the user to control actions  
3 of the output device.

1           10. The system of claim 1, further comprising processing logic for controlling the  
2 generation of a media representation.

1           11. The system of claim 1, further comprising a storage medium for storing  
2 media representations in electronic format.

1           12. The system of claim 1, wherein the media representation generated by the  
2 output device is stored on a digital storage medium.

1           13. The system of claim 1, further comprising one or more user interaction  
2 devices that permit the user to interact with the printer and control the printer's actions,  
3 wherein the user interaction devices are external to the printer.

1           14. The system of claim 1, wherein the media representation is generated in paper  
2 format that includes at least one user-selectable identifier allowing a user to access and  
3 control media content.

1           15. The system of claim 14, wherein the at least one user-selectable identifier  
2 comprises at least one barcode printed on the media representation.

1           16. The system of claim 15, wherein the at least one barcode further comprises at  
2 least one record barcode that can be scanned to record an associated media program.

1           17. The system of claim 15, wherein the at least one barcode further comprises at  
2 least play barcode that can be scanned to play an associated media program.

1           18. The system of claim 14, wherein the at least one user-selectable identifier  
2 comprises at least one numerical identifier which the user can type into an external device  
3 to access and control media content.

1           19. The system of claim 1, wherein the media representation is a document  
2 displaying scheduling information for media programs.

1           20. A method for recording media content and for generating media  
2 representations, the method comprising:  
3           extracting media content from a media receiver;  
4           generating a media representation of the media content; and  
5           communicating with a media receiver through a media transfer interface, wherein  
6           an output device communicates with the media receiver.

1           21. The method of claim 20, further comprising the output device using media  
2 content recognition techniques to recognize media content extracted from the media  
3 receiver.

1           22. The method of claim 20, further comprising the output device sending  
2 commands to the media receiver to control actions of the media receiver.

1           23. The method of claim 20, further comprising scheduling actions of the media  
2 receiver to occur at predefined times.

1           24. The method of claim 23, wherein scheduling actions further comprises  
2 scheduling generation of a media representation, wherein the generation is scheduled to  
3 occur at user-defined time periods.

1           25. The method of claim 24, wherein scheduling generation of a media  
2 representation further comprises entering scheduling preferences into a profile that  
3 controls actions of the output device which controls actions of the media receiver.

1           26. The method of claim 20, wherein generating a media representation further  
2 comprises generating a schedule representation of a list of media programs, wherein the  
3 schedule representation includes specific information about each media program.

1           27. The method of claim 26, wherein generating a schedule representation of a  
2 list of media programs further comprises formatting the schedule representation based on  
3 a pre-defined user preferences profile.

1           28. The method of claim 26, wherein generating a schedule representation of a  
2 list of media programs further comprises updating the generated schedule representation  
3 to include current schedule information.

1           29. The method of claim 26, wherein generating a schedule representation of a  
2 list of media programs further comprises:  
3           setting a media display to a channel that includes a schedule display showing  
4           media program scheduling information; and

5 performing optical character recognition on the schedule display of the media  
6 display to read schedule information content and generate a representation  
7 of the schedule display.

1 30. The method of claim 26, wherein generating a schedule representation of a  
2 list of media programs further comprises searching for specific user-defined features  
3 within the media content and displaying search results.

1 31. The method of claim 20, further comprising monitoring commands from an  
2 external interface, wherein the commands include a request to generate a media program  
3 schedule representation with user-defined parameters.

1 32. The method of claim 20, further comprising monitoring commands from an  
2 external device, wherein the commands include a request to update an internal table that  
3 stores the association between user-selectable identifiers printed on the media  
4 representation and the actions that can be executed on the output device in response to  
5 those user-selectable identifiers.

1 33. The method of claim 20, further comprising recording media content and  
2 storing the media content on a storage medium, wherein the stored media content can be  
3 played in response to commands received from an external device interface.

1           34. The method of claim 20, further comprising a web server with a common  
2 gateway interface for controlling the schedule for recording and playing of media  
3 content.

1           35. The method of claim 20 wherein generating a media representation further  
2 comprises printing media schedule information in a paper-based format.

1           36. The method of claim 35, further comprising selecting a user-selectable  
2 identifier on the paper-based format of the media schedule information to record the  
3 associated media program.

1           37. The method of claim 35, further comprising selecting a user-selectable  
2 identifier on the paper-based format of the media schedule information to play the  
3 associated media program.

1           38. The method of claim 26, further comprising updating a database that stores  
2 current schedule information and associated user-selectable identifier information.

1           39. The method of claim 26, further comprising advancing a schedule display,  
2 wherein advancing the schedule display comprises:

3           capturing a first frame of the current schedule display on a schedule channel;

4           sending a command to the media receiver to advance the schedule display on the

5           schedule channel;

- 6 capturing a second frame of the advanced schedule display on the schedule
- 7 channel; and
- 8 comparing the first frame to the second frame to determine if the schedule has
- 9 changed and the schedule display should be advanced .